0054376 H1031

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-068 H1031

DATE RECEIVED: 10/21/00 RFW LOT # :0010L008

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0YW00						
TCLP	001	S	00LTO123	08/28/00	10/25/00	10/26/00
CHROMIUM, TCLP LEACH	002	W	99L1655	10/26/00	10/27/00	10/29/00
CHROMIUM, TCLP LEACH	002 REP	W	99L1655	10/26/00	10/27/00	10/29/00
CHROMIUM, TCLP LEACH	002 MS	W	99L1655	10/26/00	10/27/00	10/29/00
LAB QC:						
CHROMIUM LABORATORY	LC1 BS	W	99L1655	N/A	10/27/00	10/29/00
CHROMIUM, TCLP LEACH	MB1	W	99L1655	N/A	10/27/00	10/29/00
CHROMIUM, TCLP LEACH	MB2	W	99L1655	N/A	10/27/00	10/29/00

DEC 2000 RECEIVED
RECEIVED JAN 2 2 2001 EDMC

RECRA
ENVIRONMENTAL
INC.

Chemical and Environmental Measurement Information

Recra LabNet Philadelphia
Analytical Report

Client: TNU-HANFORD B00-068
RFW#: 0010L008
SDG/SAF#: H1031/B00-068

W.O.#: 10985-001-001-9999-00
Date Received: 10-21-00

METALS CASE NARRATIVE

1. This narrative covers the analyses of 1 TCLP leachate sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary. This is a re-log of 0009L519-001.

3. All analyses were performed within the required holding times.

4. The cooler temperature has been recorded on the original Chain of Custody.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury).

6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).

7. All preparation/method blanks (MB) were within method criteria {less than the Practical Quantitation Limit (3X the IDL), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

8. All ICP Interference Check Standards were within control limits.

9. The laboratory control sample (LCS) was within the 80-120% control limits. Refer to form 7.

10. The duplicate analysis was outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

11. The TCLP extract from sample B0YW00 was selected for the matrix spike (MS) for this analytical batch. The MS recovery was greater than 50% as per method criteria.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 11 pages.

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12. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

13. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

J. Michael Taylor
VP, Laboratory General Manager
Lionville Laboratory

12-6-00
Date

gmb/m10-008

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Recra Lot#: 081OL008

Leaching Procedure: __1310 ✓1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A ✓3010A __3015 __3020A __3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846	EPA	STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B	__200.7			__99
Antimony	__6010B __7041 [5]	__200.7 __204.2			__99
Arsenic	__6010B __7060A [5]	__200.7 __206.2	__3113B		__99
Barium	__6010B	__200.7			__99
Beryllium	__6010B	__200.7			__99
Bismuth	__6010B [1]	__200.7 [1]		__1620	__99
Boron	__6010B	__200.7			__99
Cadmium	__6010B __7131A [5]	__200.7 __213.2			__99
Calcium	__6010B	__200.7			__99
Chromium	✓6010B __7191 [5]	__200.7 __218.2			__SS17
Cobalt	__6010B	__200.7			__99
Copper	__6010B __7211 [5]	__200.7 __220.2			__99
Iron	__6010B	__200.7			__99
Lead	__6010B __7421 [5]	__200.7 __239.2	__3113B		__99
Lithium	__6010B __7430 [4]	__200.7		__1620	__99
Magnesium	__6010B	__200.7			__99
Manganese	__6010B	__200.7			__99
Mercury	__7470A [3] __7471A [3]	__245.1 [2] __245.5 [2]			__99
Molybdenum	__6010B	__200.7			__99
Nickel	__6010B	__200.7			__99
Potassium	__6010B __7610 [4]	__200.7 __258.1 [4]			__99
Rare Earths	__6010B [1]	__200.7 [1]		__1620	__99
Selenium	__6010B __7740 [5]	__200.7 __270.2	__3113B		__99
Silicon	__6010B [1]	__200.7		__1620	__99
Silica	__6010B	__200.7		__1620	__99
Silver	__6010B __7761 [5]	__200.7 __272.2			__99
Sodium	__6010B __7770 [4]	__200.7 __273.1 [4]			__99
Strontium	__6010B	__200.7			__99
Thallium	__6010B __7841 [5]	__200.7 __279.2 __200.9			__99
Tin	__6010B	__200.7			__99
Titanium	__6010B	__200.7			__99
Uranium	__6010B [1]	__200.7 [1]		__1620	__99
Vanadium	__6010B	__200.7			__99
Zinc	__6010B	__200.7			__99
Zirconium	__6010B [1]	__200.7 [1]		__1620	__99

Other:_____ Method:_____

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

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INORGANICS DATA SUMMARY REPORT 12/06/00

CLIENT: TNUHANFORD B00-068 H1031 RECRA LOT #: 0010L008

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B0YW00	Chromium, TCLP Leachate	5.0	UG/L	3.5	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 12/06/00

CLIENT: TNUHANFORD B00-068 H1031 RECRA LOT #: 0010L008

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	99L1655-MB1	Chromium, TCLP Leachate	3.5	u	UG/L	3.5	1.0
BLANK2	99L1655-MB2	Chromium, TCLP Leachate	3.9		UG/L	3.5	1.0

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INORGANICS ACCURACY REPORT 12/06/00

CLIENT: TNUHANFORD B00-068 H1031 RECRA LOT #: 0010L008

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	B0YW00	Chromium, TCLP Leachat	4390	5.0	5000	87.8	1.0

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INORGANICS PRECISION REPORT 12/06/00

CLIENT: TNUHANFORD B00-068 H1031 RECRA LOT #: 0010L008

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	B0YW00	Chromium, TCLP Leachate	5.0	8.1	47.3	1.0

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INORGANICS LABORATORY CONTROL STANDARDS REPORT 12/06/00

CLIENT: TNUHANFORD B00-068 H1031 RECRA LOT #: 0010L008

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	99L1655-LC1	Chromium, LCS	497	500	UG/L	99.4

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00101L008

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TRU-Hanford B00-068
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: OJ
QC: Spec Del: Std TAT: 7day
Date Rec'd: 10-21-00 Date Due: 10-28-00
Account #:

		VOA	BNA	Pest/PCB	Herb					Metal	CN						
Refrigerator #								A 4									
#/Type Container	Liquid																
	Solid							1AG	leachate								
Volume	Liquid																
	Solid							250									
Preservatives								-									

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected							ITCLP	mcRTC							
001	B0YW00	✓	✓	S	8/28/00	1000							✓								
002	B0YW00 tclp of 001			L	*	—								✓							

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Special Instructions: Saf B00-068

DATE/REVISIONS:
1. Relog of 0009L519-001 (SDR 00PM136)
* 2. See labchron
3.
4.
5.
6.

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Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill #
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N
Cooler Temp. ___ °C

Relinquished by	Received by	Date	Time
Relog	TKeppel	10/21/00	—

Relinquished by	Received by	Date	Time
COMPOSITE	ORIGINAL		
WASTE	REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES: